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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/507,392

04/08/2005

Fumitsugu Fukuyo

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EXAMINER

ULLAH, ELIAS

ART UNIT

PAPER NUMBER

2812

MAIL DATE

DELIVERY MODE

06/14/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/507,392	Applicant(s) FUKUYO ET AL.	
	Examiner Elias Ullah	Art Unit 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-17, 22, 24, 25, 27-30, 34-38, 42-44 and 49 is/are allowed.
- 6) ☐ Claim(s) 14, 18-20, 23, 26, 39-41, 45-48 and 50-56 is/are rejected.
- 7) ☐ Claim(s) 22 and 31-33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :11/09/2006, 6/20/06/4/20/06, 4/4/06, 2/22/06, 8/30/05, 5/4/2005.

DETAILED ACTION

This office action is in response to an application filed on 4/8/2005.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14, 18-20, 23, 26, 39-41, 45, 46-48, 50-56 are rejected under 35

U.S.C. 102(b) as being anticipated by Srinivasan (US 5,211,805).

With respect to claims 14, 18-20, 23, 26, 39, 40-41, 45, 46-48, 50-56 Srinivasan shows a laser processing method comprising the step of irradiating an object to be processed comprising a substrate and a laminate part disposed on a front face of the substrate with laser light while positioning a light-converging point at least within the substrate (col. 6, lines 1 –51), so as to form a modified region due to multiphoton absorption at least within the substrate, and causing the modified region to form a starting point region for cutting along a line along which the object should be cut in the object inside by a predetermined distance from a laser light incident face of the object.

Allowable Subject Matter

Claim 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following subject matter is allowable: " a molten processed region which is region subject to melting within the substrate , and a refractive index change region which is a region with a changed refractive index within the substrate".

Claims 31-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following subject matter is allowable: the substrate laminate part overlap with each other along the line along which the object should be cut, where in the thickness direction of the object.

Claims 15-17, 22, 24-25, 27-30, 34-38, 42-44, 49 allowed.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: with respect to claims 15-17, 24-25, 42-44 and 49, there is no prior art available or obvious motivation to combine elements of prior art which teach the step of irradiating an object to be processed comprising a substrate and a laminate part disposed on a front face of the substrate with laser light while positioning a light converging point at least within the substrate under a condition with a peak power density of at least 1×10^8 (W/cm²) at the light converging point and a pulse width of 1 micro second or less. The closest art (US

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5,211,805) of the record teach pack power pack density 1×10^6 (W/cm²). Claims 22 is dependent on claim 15; claims 27-30 are dependent on claim 15; claims 34-38 are dependent claim 15.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Ullah whose telephone number is (571) 272-1415. The examiner can normally be reached on weekdays, between 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL LEBENTRITT can be reached on (571)272-1873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MICHAEL LEBENTRITT
SUPERVISORY PATENT EXAMINER

E. Ullah, June 8, 2007.